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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,319	10/29/2003	Darrell Glenn Senile	130560	6541
7590	05/15/2007		EXAMINER	
John S. Beulick Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St. Louis, MO 63102			KIM, TAE JUN	
			ART UNIT	PAPER NUMBER
			3746	
			MAIL DATE	DELIVERY MODE
			05/15/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/696,319	SENILE ET AL.
	Examiner Ted Kim	Art Unit 3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 10/29/2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/29/2003</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1<sup>st</sup> and 2<sup>nd</sup> shafts 24, 26. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 16 is objected to because of the following informalities: “said said” should be replaced –said--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al (5,683,034). Johnson et al teach a method for assembling a flap system for a gas turbine engine exhaust nozzle including at least one backbone assembly 28, said method comprising: providing a basesheet including a pair of circumferentially-spaced sides 38, 40 coupled together by an upstream side and a downstream side forming at least one relief cut 78 in the basesheet that extends at least partially across the basesheet from at least one of the circumferentially-spaced sides; and coupling the basesheet 32A to the backbone assembly; wherein the basesheet includes a flowside and an opposite back side, wherein forming at least one relief cut in the basesheet further comprises forming at least one relief cut that extends at least partially across the basesheet from each of the circumferentially-spaced sides; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing thermal stresses induced to said basesheet; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing deformation of said basesheet. A gas turbine engine comprising a variable engine exhaust nozzle comprising a flap system coupled to said engine exhaust nozzle, said flap system comprising a backbone 28 and a basesheet configured to couple to said backbone, said basesheet comprising at least one relief cut and a pair of circumferentially-spaced sides 38, 40 coupled together by an upstream side and a downstream side, said basesheet at least one relief cut 78 extending from at least one of

said circumferentially-spaced sides towards said other respective circumferentially-spaced side; wherein said flap system basesheet comprises a flowpath side and an opposite back side, said at least one basesheet relief cut extending from said flowpath side to said back side; wherein said basesheet has a centerline axis, said at least one relief cut oriented substantially perpendicularly to said centerline axis; wherein said basesheet at least one relief cut further comprises at least one relief cut extending at least partially across said basesheet from each said circumferentially-spaced basesheet; wherein said basesheet at least one relief cut further comprises a plurality of axially-spaced relief cuts extending between said basesheet upstream and downstream sides; wherein said basesheet at least one relief cut facilitates reducing thermal stresses induced to said basesheet during engine operation; wherein said basesheet at least one relief cut facilitates reducing deformation of said basesheet during engine operation; wherein said basesheet upstream side has a first width measured between said circumferentially-spaced sides, said basesheet downstream side has a second width measured between said circumferentially-spaced sides, said first width different than said second width (see Figs. 9, 10)

5. Claims 1, 3-6, 8-14, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lybarger (5,000,386). Lybarger teaches a method for assembling a flap system for a gas turbine engine exhaust nozzle including at least one backbone assembly 21, said method comprising: providing a basesheet 22 including a pair of circumferentially-spaced sides coupled together by an upstream side and a downstream

side forming at least one relief cut 45 in the basesheet that extends at least partially across the basesheet from at least one of the circumferentially-spaced sides; and coupling the basesheet to the backbone assembly; wherein the basesheet includes a flowside and an opposite back side, wherein forming at least one relief cut in the basesheet further comprises forming at least one relief cut that extends at least partially across the basesheet from each of the circumferentially-spaced sides; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing thermal stresses induced to said basesheet; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing deformation of said basesheet. A gas turbine engine comprising a variable engine exhaust nozzle comprising a flap system coupled to said engine exhaust nozzle, said flap system comprising a backbone 21 and a basesheet 22 configured to coupled to said backbone, said basesheet comprising at least one relief cut 45 and a pair of circumferentially-spaced sides coupled together by an upstream side and a downstream side, said basesheet at least one relief cut extending from at least one of said circumferentially-spaced sides towards said other respective circumferentially-spaced side; wherein said basesheet has a centerline axis, said at least one relief cut 45 oriented substantially perpendicularly to said centerline axis; wherein said basesheet at least one relief cut further comprises at least one relief cut extending at least partially across said basesheet from each said circumferentially-spaced basesheet; wherein said basesheet at least one relief cut further comprises a plurality of axially-

spaced relief cuts 45 [note that when assembled elements 37, 50, 36, 26 (see Fig. 2) are on top of 45 and the portions of 45 between 37, 50, 36, 26 can be regarded as a plurality of spaced apart relief cuts] extending between said basesheet upstream and downstream sides; wherein said basesheet at least one relief cut facilitates reducing thermal stresses induced to said basesheet during engine operation; wherein said basesheet at least one relief cut facilitates reducing deformation of said basesheet during engine operation; wherein said basesheet upstream side has a first width measured between said circumferentially-spaced sides, said basesheet downstream side has a second width measured between said circumferentially-spaced sides, said first width different than said second width (see Figs. 3, 4).

6. Claims 1-12, 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson et al (4,690,330). Robinson et al teach a method for assembling a flap system for a gas turbine engine exhaust nozzle including at least one backbone assembly 50, said method comprising: providing a basesheet including a pair of circumferentially-spaced sides coupled together by an upstream side and a downstream side forming at least one relief cut (between adjacent sections 90) in the basesheet that extends at least partially across the basesheet from at least one of the circumferentially-spaced sides; and coupling the basesheet to the backbone assembly 50; wherein the basesheet includes a flowside and an opposite back side, said forming at least one relief cut (between adjacent sections 90) in the basesheet further comprises extending the relief cut through the basesheet from the basesheet flowside to the basesheet back side (seen in Figs. 10, 11); wherein forming

at least one relief cut in the basesheet further comprises forming at least one relief cut that extends at least partially across the basesheet from each of the circumferentially-spaced sides; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing thermal stresses induced to said basesheet; wherein forming at least one relief cut in the basesheet further comprises forming the at least one relief cut in the basesheet to facilitate reducing deformation of said basesheet. A gas turbine engine comprising a variable engine exhaust nozzle comprising a flap system coupled to said engine exhaust nozzle, said flap system comprising a backbone and a basesheet configured to couple to said backbone 50, said basesheet comprising at least one relief cut (between adjacent sections 90) and a pair of circumferentially-spaced sides coupled together by an upstream side and a downstream side, said basesheet at least one relief cut extending from at least one of said circumferentially-spaced sides towards said other respective circumferentially-spaced side; wherein said flap system basesheet comprises a flowpath side and an opposite back side, said at least one basesheet relief cut extending from said flowpath side to said back side; wherein said basesheet has a centerline axis, said at least one relief cut oriented substantially perpendicularly to said centerline axis; wherein said basesheet at least one relief cut further comprises at least one relief cut extending at least partially across said basesheet from each said circumferentially-spaced basesheet; wherein said basesheet at least one relief cut further comprises a plurality of axially-spaced relief cuts extending between said basesheet upstream and downstream sides; wherein said basesheet at least

one relief cut facilitates reducing thermal stresses induced to said basesheet during engine operation; wherein said basesheet at least one relief cut facilitates reducing deformation of said basesheet during engine operation.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax number for the organization where this application is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg, can be reached at 571-272-4828. Alternate inquiries to Technology Center 3700 can be made via 571-272-3700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at <http://www.uspto.gov/main/patents.htm>

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Ted Kim	Telephone	571-272-4829
Primary Examiner	Fax (Regular)	571-273-8300
May 2, 2007	Fax (After Final)	571-273-8300
Technology Center 3700	Telephone	571-272-3700